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THE

CHESTER & TAMAROA

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Coal and Railroad Company,

WITH A

GEOLOGICAL REPORT

OF ITS

Resources and Prospective Business.

CINCINNATI:

BRADLEY & POWER, STATIONERS AND PRINTERS, 149 MAIN STREET.

1871.

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THE CHESTER AND TAMAROA COAL AND RAILROAD COMPANY.

The Chester and Tamaroa Coal and Railroad Company was chartered by special act of the General Assembly of the State of Illinois, approved March 4th, 1869, entitled "an Act to incorporate the Chester and Tamaroa Coal and Railroad Company," with full power and authority to build, equip and maintain a railroad from the Mississippi River at Chester, in the county of Randolph, easterly on the most eligible route via Pinckneyville, in Perry county, to Tamaroa, in Perry county, a station on the Illinois Central Railroad. [For the entire act of incorporation, see Appendix.]

In offering to the public for investment the lands issued by counties and towns in aid of the construction of this road, and the first mortgage bonds of the road itself, it is proper to present a statement concerning the road, its location, the resources of the country it traverses, and its prospective business, together with the seeurity of both classes of bonds as an investment.

TOPOGRAPHY AND RESOURCES.

We present herewith a report of the route, and the mineral and agrieultural resourees of the country traversed by it, made by Col. J. W. Foster, L. L. D., an eminent geologist of large experience and most extensive aequaintance. His report is made after a careful survey and examination of the territory, and his high character is the surest guaranty of its reliability and accuracy.

Espeeial attention is invited to his remarks relative to the character and extent of the coal field, its proximity to a reliable water line, the character of the landing at Chester, and the demand for coal at that point. Also to the proximity of the celebrated Iron Mountain mines in Missouri, and the facility with which the iron can be brought to meet the coal at Chester.

REPORT

UPON THE COAL FIELD,

ADJACENT TO THE LINE

OF THE

CHESTER & TAMAROA RAILROAD,

By J. W. FOSTER, LL. D.

The construction of the Chester and Tamaroa Railroad, extending through the two counties of Randolph and Perry, in the State of Illinois, and forming a direct connection with the Illinois Central Railroad on the one hand, and the Mississippi River on the other, is destined to develop what I regard as the most valuable portion of the Illinois coal field, and will enable the products of this field successfully to compete in the markets of the South and West with the existing sources of supply.

TOPOGRAPHY.

It is well known that the Mississippi River flows through an alluvial valley not less than ten miles in width, and expanding even to seventy miles. This valley is lined with bluffs, which attain an elevation of at least two hundred and fifty feet. The immediate current sways to and fro, at rare intervals impinging on these bluffs; and wherever these conditions occur there is deep water and a practicable landing. While the volume of water discharged by this stream is vast, it is subject to great fluctuations. The purely alluvial portions of the valley each year are submerged,

and it is only on the bluffs that eligible sites for towns can be obtained. Hence, in inspecting a map of the river, the observer is struck with the paucity of towns which line its banks. In this respect it exhibits a far different regimen from that of the Hudson, the St. Lawrence, the Connecticut, and other rivers of the seaboard states. The Chester bluffs offer about the only point on the Illinois shore, between St. Louis and Cairo, where the river may be approached without passing over a very considerable interval of land not subject to overflow. These bluffs are rock-bedded, and rise with a gradual slope to the height of two hundred and seventy-five feet, and the depth of the channel at the base, in an ordinary stage of water, is forty feet. To those acquainted with the navigation of this river and its extreme fluctuations, these advantages need not be specially commended.

Attaining to the summit of the bluffs, the country spreads out into broad table lands, so that communication can be effected between distant points by following a nearly air line. High grades or abrupt curves are not needed. The St. Mary's river affords a practicable route for making the descent from the high grounds to the river landing.

The face of the country is alternate timber and prairie. The predominating growth of the uplands is oak, with hickory, maple, linden, black gum, black ash, etc., while upon the bottom lands occur sycamore, black walnut, cottonwood, hackberry, pecan, bur-oak, etc. Ties, for railroad use, ought to be procured at a price little above the cost of cutting and hewing into shape.

The bottoms afford the finest corn lands in the world, while its uplands are admirably adapted to the culture of winter wheat. The flour manufactured at Chester, derived from this region, commands the highest market price. At an early day in the history of Illinois, the Scotch-Irish made a settlement in this region, which they have developed into well-tilled farms.

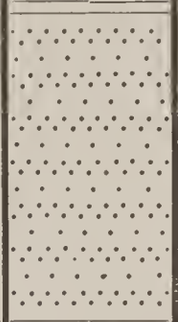
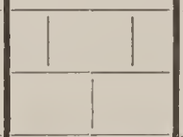
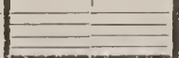
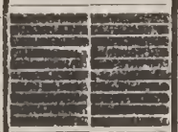
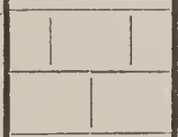
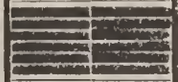
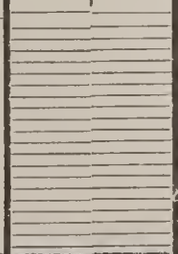
The last census of the United States shows the prodigious strides which this State has made in population and material wealth. The annual reports of the principal railroads traversing the State, show that from eighty-six to ninety per cent. of their earnings are derived from local freights. Now, where is a region which, apart from mineral resources, is as desirable in soil and climate as the

most favorable portions of Illinois? but which, being outside of the great lines of communication has not had the advantages of railroad facilities. Its farm products alone are ample to maintain a railroad.

GEOLOGY.

While two-thirds of the State of Illinois are underlaid by the Coal Measures, at no point do the productive seams approach the great navigable streams—the Ohio and Mississippi. To make them available, artificial communications must be constructed into the interior.

At Chester we have a series of limestones, shales and even sandstones, forming an assemblage of rocks beneath the Coal Measures, which have been classified as "the Chester groups." These rocks, ranging in a north-west and south-east direction, occupy about one-third of the county of Randolph. Above these, come in the productive Coal Measures which, while occupying the remaining portion of the county, underlie the whole of Perry county. The western line of the Coal Measures would strike the western part of T. 7 S. R. 5 W., and thence wending north-west, pass through the eastern part of T. 4 N. R. 7 W. The dip of the strata is to the north-east, at a very moderate angle, say ten feet to the mile. In the assemblage of sandstones, shales, and limestones, making up the series, are to be included not less than three seams of workable coal, varying from three to seven feet in thickness. Not less than twenty-three borings have been made through the series of strata in Randolph and Perry counties, to determine the character and continuity of these seams, and the following, I think, may be assumed as a just statement of their thickness.

No.	STRATA.	Feet.	SECTION OF THE STRATA.
1		20	Earth and red clay.
2		8	Limestone.
3		1½	Black shale.
4		7	Coal, of excellent quality.
5		5	Fire-clay.
6		13	Black shale.
7		8	Limestone.
8		14½	Black shale.
9		4	Coal, firm and of excellent quality.
10		6	Fire-clay.
11		8	Limestone.
12		24	Black shale.
13		6½	Coal, firm and of excellent quality.
14			Fire-clay.
Feet, 119.			

We thus have adjacent to this line and at accessible depth, not less than three seams of coal of more than ordinary thickness and of a very good quality. It is not necessary to dilate upon the vast amount of fossil fuel here treasured up for the wants and conveniences of man. Suffice it to say, that, mining at the rate of a thousand tons a day for a thousand years, the supply would still be abundant.

COAL SEAMS OF RANDOLPH COUNTY.

The upper seam of coal, as will be seen by the foregoing section, is overlaid, at no great distance, by a bed of limestone eight feet in thickness. This limestone is of a bluish color, is of sufficient purity to burn with quicklime, and of sufficient durability to yield a good material for construction; and, at the same time, it affords one of the best roofs that I have ever seen in a coal mine, being impervious to water and having the strength to hold up the incumbent materials. Its under surface is as smooth as the plastering of a house-ceiling, and upon it atmospheric agents have no effect. Sometimes the coal comes in immediate contact with the limestone, but at others there is interposed a layer of black slate. Along the line of the proposed railroad the detrital materials resting on the limestone attain no great thickness. At Jones' bank (S. 14 T 6 R. 5), they are only nineteen feet thick, and on Mary's River the coal emerges to the surface, and also four miles south of Georgetown, on Cox's Creek.

In the vicinity of Sparta (Boyd's bank), the superficial materials are only twenty feet thick, but a mile and one-half to the northeast the coal is reached by a shaft forty feet deep. It will thus be seen that over two-thirds of this county, at a very moderate depth, there lies a coal seam whose average thickness is in excess of six feet. At Jones' Shaft, where I selected specimens for assay, it is seven feet five inches in thickness. Instead of being a uniform mass, it is divided into five distinct layers, separated by thin partings of shale from one-fourth to one half an inch in thickness, and this character was seen at every opening which I examined. Each layer of coal, too, differs in external character and chemical composition.

The following is a section of the seam:

Layer No. 1, (Blacksmith)	20	inches.
" 2, (Peacock)	14	"
" 3, (Middle)	21	"
" 4, (Block)	18	"
" 5, (Bottom)	16	"
Total thickness, 7 feet 5 inches	89	"

CHEMICAL COMPOSITION.

Dr. Blaney, President of the Rush Medical College of Chicago, at my request, has subjected these several layers of coal to analysis, to determine—1, the amount of hygrometric moisture present, which is expelled only at the expense of the fixed carbon; 2, the amount of volatile combustible matter which, as it ordinarily goes off in the form of vapor and smoke, is of little economical value; 3, the amount of fixed carbon, by which to judge of its heating or evaporative power, and 4, its impurities, as indicated by the amount and character of the ash.

I selected samples from each layer which individually possesses great uniformity, in order to test their comparative merits They were first subjected to a temperature of 160°, in order to expel such an amount of moisture as would naturally be thrown off by the process of seasoning under shelter. They were then weighed and subjected to a temperature of 300°, in order to expel the hygrometric moisture, and again weighed. The results of the quantitative analysis are as follows:

	Water at 300°.	*Fixed Carbon.*	*Vol. Matter.*	*Ash.*	*Color of Ash.*
No. 1	6.310	62.753	28.687	2.250	White and flocculent
No. 2	7.500	50.000	40.625	1.875	do. do
No. 3	9.250	46.688	29,500	5.312	Faint lavender.
No. 4	6.225	61.575	26.500	5.300	Pure white.
No. 5	8.475	56.245	25.280	10 000	Faint shade of brown.

In examining these assays, it may be said that, so far as relates to layers Nos. 1 and 4, they compare favorably with those of the very best dry coals to be found in the United States, except, perhaps, in the matter of water, which apparently is in excess; but for the purposes of comparison, I subjected well-seasoned

specimens of Ormsby and Youghiogheny coals to the same process (300° of temperature, and continued until no further loss was appreciable), and the result was that, in the first instance, I obtained four per cent.; and in the second five per cent. of water. The pure white and flocculent ash which characterizes these layers, with the exception of No. 5, indicates the absence of sulphur and iron; and in layers Nos. 1 and 4, there is sufficient fixed carbon to reduce the iron ores. Thirty-eight inches, then, of this seam, it is believed, may be pronounced iron-making coal.

No. 2 (14 inches) is rich in gas-making materials, and is characterized by its small amount of ash, and its freedom from sulphur.

Nos. 3 and 5 (38 inches) will serve very well for steam and domestic uses.

The joints of the coal are occasionally filled with a white incrustation which, I find, consists of carbonate of lime, sulphate of lime, sulphuret of iron, with traces of silica and magnesia; but the actual amount of sulphur, the injurious ingredient in the ash is less than five per cent., which, in reference to the mass of coal, would be inappreciable.

The other materials, lime, silica, magnesia, etc., are in no respects deleterious, whether employed for gas, steam, or domestic purposes, or for the reduction of iron.

No. 5 is quite impure, and is only fit for ordinary purposes.

Mechanical Textures.—The top layer, while readily cleaving among the lines of lamination, on cross-fracture, breaks into angular fragments. It is known as "blacksmith coal," for which purpose it is employed in the neighborhood.

The second layer exhibits an irridescent surface, both on longitudinal and cross-fracture—a peculiarity which I have rarely noticed in bituminous coals—and hence may be designated as "peacock coal."

The middle layer is more tender, and breaks into smaller mechanical divisions.

The fourth layer comes out in large quadrangular blocks, and is known as "block coal."

The fifth layer, while firm, and breaking into angular blocks, on cross-fracture is less brilliant, indicating a greater amount of impurities.

All of these layers, except, perhaps, the third, have sufficient strength and firmness to sustain the burden of a furnace; in combustion they maintain their form, so as to permit the air to circulate freely through their interstices, and yield little or no clinker. Mr. Cole, of Chester, informed me that grate-bars placed in his furnace, in 1862, in which this coal was burned, were at this time without warp or corrosion.

A barge load of this coal, from layers Nos. 1 and 4, was shipped to Carondolet, where it was tested with entire success in a blast furnace.

The Big Muddy coal, which corresponds to the lowest seam in the Randolph county section, has been for several years employed for iron-smelting, being mixed, however, with one-third coke, producing an iron which commands the highest market price. Its chemical composition, as shown by the assay of Mr. Bridgham, of the school of mines, of New York, does not indicate any superiority over the iron-smelting layers of the Randolph coal:

ASSAY OF THE BIG MUDDY COAL.

Water at 300°	3,620	
Volatile matter	33,581	
Fixed carbon	60,492	
Sulphur	.858	
Ash, (white)	1,497	100.00

Since it has been demonstrated that the Big Muddy coal was adapted to iron-smelting; not less than nine furnaces have been erected in the vicinity of St. Louis, which look to this source for their supply of fuel. In supplying the existing demand as well as that which must be created with the rapid development of the iron resources of Missouri, it is confidently believed that the Randolph coal can successfully compete.

Other Seams.—About twenty-six feet below the seam above described, occurs another seam of workable thickness. I only saw it cropping out at one point, Stanway's bank, where it is four feet five inches in thickness. The coal itself is quite as firm as that of the upper seam, but contains more sulphur, and I should infer more earthy matter. The presence of these ingredients, together with the diminished thickness, renders it less valuable

than the upper seam; and, therefore, I did not deem it neeessary to select specimens for assay. This is, perhaps, an abnormal thickness, for at other points, it only reaches three, or three and one-half feet.

Thirty-three feet below, or about one hundred and nineteen feet from the surface, as indicated by numerous boreings, occurs a third seam six and one-half feet thick, and, singular as it may seem, it has not been observed anywhere in the county cropping out at the surfaee. It is, undoubtedly, the equivalent of the Big Muddy seam, but unlike that seam which is separated by a clay parting ten inches in thickness, expanding to several feet, as traced from the present mining site, it appears here to be of uniform texture. Its out-crop, which ought to be near the immediate bluffs of the Mississippi, is evidently concealed by the heavy deposits of Loess.

COAL SEAMS OF PERRY COUNTY.

As far back as 1856, my attention was called to the coals of this county, and my observations were published in a report on "The Mineral Resources of the Illinois Central Railroad." Since then, what is known as the Du Quoin seam, has been penetrated at many points, and has furnished a vast amount of fuel, not only for domestie purposes, but for propelling locomotives. It is a good, strong, generous coal, some of which even finds its way to the Chicago market. To the Illinois Central Railroad Company it has proved a mine of wealth, in giving them cheap fuel, to operate their locomotives over a very considerable portion of their far-stretching line. The seam at Du Quoin is six feet ten inches thick, and is eighty-two feet below the surface. The superficial materials, yellow-clay, clean sand, and blue clay, are twenty-four feet in thickness, while the bed-rock, fifty-eight feet, consists of alternations of limestones, shales, and fire-clays. The dip of the strata here is westerly, at the rate of forty feet to the mile, a deviation from the general inclination of the rocks in this part of the State. The seam is pretty uniform throughout. The coal is thoroughly compacted, comes out in large cuboidal blocks, has no great amount of crock, and in lustre is jet-black. The septæ of

the joints are occasionally filled with calc-spar, and the evidences of sulphur are not wanting in the form of the bi-sulphuret of iron. An assay of this coal made at that time gave,

Water	7.00	
Volatile matter	28.20	
Fixed carbon	61.20	
Ash	3.20	100.00

Whether the Du Quoin seam is identical with the upper seam in the Chester series, is a matter of doubt; but in an economical report I need not pause to discuss the question, when it is known that, over a very considerable area of this county, it can be penetrated at no great depth, and is so persistently developed as to afford no data for calculating the time of its exhaustion.

At Pinkneyville the Du Quoin seam is worked and is found to be six feet thick. Below this point, at Beaucoup Creek, this seam crops out, and several openings have been made in it. The drab-colored limestone which overlies this seam about thirty feet and forms a reliable guide in exploring for it, is seen cropping out in many places in the southern part of the county; but so slight is the demand for coal remote from railway communication, that no effort has been made to open mines.

COAL MARKETS.

The first coal seam to be developed by this railway is distant fifteen miles from Chester, and thence all the way to Tamaroa coal may be reached by shafts of no great depth.

The demand for coal on the Mississippi and its tributaries seems almost unlimited. Three million tons, mined mainly in the vicinity of Pittsburgh, pass down the Ohio River annually on their way to the southern markets. There is a virtual suspension of navigation on the Upper Ohio, so far as relates to coal barges, from June to November, by reason of low water; and for two months the river is closed by ice. This condition of affairs is attended with serious inconvenience, both to the proprietors of the mines and of the coal yards, for the one class must carry on his operations for months without getting any returns, and the other must hold a stock during the season when there is little demand for coal.

The advantages of the Randolph coal field over that of Pittsburgh, are these: It is a thousand miles nearer the Southern market, the navigation of the Lower Mississippi is never suspended either by reason of low water or floating ice, the coal dealer can regulate his business by the law of supply and demand, and withal can furnish a coal equally good, whether for steam or domestic purposes.

The nine furnaces in the vicinity of St. Louis, annually consume over one hundred thousand tons of coal of a peculiar quality, and at present it is derived from a single source. In addition to this, the city of St. Louis probably requires nearly a million tons of ordinary coal for steam and domestic purposes. These coals are derived from Belleville, Alton, the Illinois River, and the isolated beds in the vicinity of the city; but they are of an inferior quality, and fail to command by fifty per cent. the price of the Big Muddy coal.

There is another great source of consumption, and that is the steamers navigating the Mississippi. It is estimated that twenty steamers pass Chester each day, and if each were to take on at this point a two days' supply of fuel, say fifty tons, it would create a daily demand of one thousand tons. This would require four trains a day over the road of twenty-five cars each, and Chester would become the first coaling station below St. Louis, and the only point on the Lower Mississippi, with the exception of Grand Tower, where coal is delivered on the river bank without transhipment.

These facts, I think, show that the opening of this route will enable the Chester and Tamaroa coals to successfully compete with the existing sources of supply in the great marts of the Mississippi Valley.

PROXIMITY OF THE IRON ORES.

The Iron Mountain of Missouri, in an air line, is less than fifty miles distant from Chester. Through the Iron Mountain Railroad the ores may be delivered about fifty miles above and about the same distance below Chester; but measures are in progress by which they will be carried to the river bank by the shortest route, and delivered at a point nearly opposite the terminus of this road.

Now, it is well known that, by reason of their richness and purity, the specular iron ores of Lake Superior and Missouri are the most highly esteemed of all the iron ores in the country, and the annual product of pig metal, derived from these two sources, is in excess of the whole product of the United States in 1850. The universal experience of ironmasters throughout the Lake region and the Mississippi Valley is, that it is better to transport these ores to the fuel, than to rely upon the impure carbonates of the Coal Measures; and hence these ores, in many instances, are smelted twelve hundred miles from where they are mined. The annual product of the Lake Superior mines is in excess of seven hundred and fifty thousand tons, while that of the Iron Mountain region reaches nearly three hundred thousand tons. Between the ores of the two regions, so far as relate to the richness and freedom from deleterious ingredients, such as sulphur and phosphorus, no discrimination is to be made. They give about sixty-five per cent. pig iron in the blast furnace, but in order that they may not flow in a pasty condition they are mixed with more earthy ores so as to reduce the yield of the charge to about forty-eight per cent. The furnaces in operation at Carondolet, and the high character which their products maintain in the iron market, demonstrate the fact that here exist facilities for effecting a union between the coal and iron as cheaply as at any other point in the United States. It should be borne in mind, too, that this union is effected on the borders of a river which, with its tributaries, affords not less than nine thousand miles of internal navigation, at a cost ten times cheaper than any railway communication; and hence, the facilities for sending the products of these furnaces to the markets of the West are unrivalled.

The brown hæmatites, which are most highly esteemed for admixture with the specular ores, occur in the region south of the Iron Mountain; also in Franklin county, and at Birmingham, thirty miles south of Chester. It is said too—but I cannot verify it by personal observation—that these ores occur on the west bank of the river twelve miles distant from Chester, and on the projected route to the Iron Mountain.

The Chester limestone affords as good a flux as could be desired, and ought to be delivered at the furnace at less than a dollar a ton.

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The facts here presented show conclusively, I think, that the construction of the Chester and Tamaroa Railroad will open up a valuable coal field from which large supplies will be drawn for the Southern market, and at the same time, it will communicate a prodigious impulse to the iron manufacture of the Mississippi Valley.

J. W. FOSTER.

A company is now organized and at work opening coal mines on the line of the road, with ample capital and under the management of men of large experience in coal mining. There is no doubt whatever that by the time the western one-half of the road is completed, the coal business will be in such a condition as to guaranty a paying business at once.

THE SURFACE BUSINESS.

By the census of 1870, Perry county had a population of 13,723. The products of the county, including agriculture and manufactures, amounted to $1,555,193, of which $330,240 was coal and $131,555 was flour. The real and personal property was valued at $7,536,748.

Randolph county by the census of 1870, had a population of 20,859. Her agricultural and manufactured products amounted to $4,146,167, of which $1,422,136 was flour. The real and personal property of the county was valued at $13,831,636.

The city of Chester produced, in 1868, manufactured articles valued at $626,240, of which $490,000 was flour.

In 1869, the two counties of Randolph and Perry produced 1,379,568 bushels of wheat, 894,526 bushels of corn, and $1,672,441 worth of live stock, a large portion of which was exported.

These two counties have an area of 465,442 acres, of which 234,398 acres are improved and being brought under cultivation. The entire area is capable of the highest culture, and produces winter wheat of the very finest quality, together with all other agricultural products peculiar to that climate. As a fruit-growing region it has few superiors, and the fruit crop seldom suffers by spring frosts, or the insect pests which prove so destructive in other localities.

COUNTY AND CITY BONDS.

There have been issued in aid of the construction of the road, bonds, as follows:

Tamaroa, 7 per cent. 5-20s	$25,000
Perry county, 7 per cent., 20 years	100,000
Chester city, 5-20s, 7 per cent	75,000
Randolph county, 10 years, 8 per cent	100,000
Pinckneyville, Perry county, 20 years, 7 per cent	15,000
	$315,000

These bonds are duly authorized by the proper authorities, upon a vote of the counties and towns, in accordance with the Illinois statutes. The peculiarities of the Illinois laws with reference to county and city lands, are such as to render them equal to State bonds for security and the general character of the investment. In fact, they become practically a State security, because,

First.—The Auditor of Public Accounts must levy a sufficient tax to pay all interest, principal and cost of disbursements.

Second.—The County Clerk, of the proper county, upon receipt of the levy, must extend the taxes so as to collect the necessary amount.

Third.—The Collector of the State Revenue must collect the taxes so levied by the Auditor and extended by the County Clerk, and pay the same over to the State Treasurer, in the same manner as State funds collected by him, and—

Fourth.—The State Treasurer must pay the interest on such bonds out of the funds there provided—at the same place, time and manner as State interest is paid by him.

In order that these reasons may be fully understood, we insert the following extracts from the provisions of this act:

"When the bonds of any county or city, to the amount ot twenty thousand dollars, shall be registered, the Auditor shall annually ascertain the amount of interest for the current year, due and accrued, and to accrue, against any county or city. On all such bonds so registered in this office, to which amount, where such bonds or securities provide for payment of five per cent. of the principal thereof annually, he shall add five per cent. of such principal thereof, and shall upon the basis of the certificate of valuation of property transmitted to him, or, in case no such certificate shall be filed in his office, then upon the basis of the total State revenue of such county or city for the year next preceding or of the assessment appertaining thereto of such year's estimate, and determine

the rate per centum on the valuation of property within such county or city, requisite to meet and satisfy the same interest, or interest and principal, as the case may be, together with ordinary costs to the State of collection and disbursements of the same, to be estimated by the Auditor and Treasurer; and shall make and transmit to the county clerk of such county, and to the officer or authority, whose duty it is, or shall be, to prepare the estimates and books for the collection of State taxes in such county or city, a certificate stating such estimated requisite per centum for such purposes, to be filed in his office; and the same per centum shall thereupon be deemed added to and a part of the per centum which is or may be levied, or provided by law, for purposes of State revenue, and shall be so treated by such clerk, officer or authority, in making such estimates and books for the collection of taxes, and the same taxes shall be collected with the State revenue, and all laws relating to the State revenue shall apply thereto."

"The State shall annually collect and apply the said fund to the satisfaction of the annual interest, or annual interest at five per centum of the principal, as the case may be, of such registered bonds of any such county or city, to the extent the same is herein contemplated to be derived from such tax in the same county or city, in the same manner as interest on the bonds of the State are or may be collected and paid, but in like moneys as shall be receivable in payment of State taxes."

"All laws relating to the payment of interest on the State debt, or the cancellation of evidences thereof, not inconsistent with this act, shall apply to the receipt, custody and disbursement of the taxes and fund provided by this act."

"Upon maturity of any such registered bonds or securities, in case of non-payment thereof, by the county or city issuing the same, the holders thereof may cause the same to be registered in the office of the Auditor as matured and unsatisfied bonds, and thereupon, for the purpose of providing for the payment of the principal of the same matured bonds, at the rate of five per cent. of such principal annually, and of interest thereon in arrear, and for the current or ensuing year to accrue, together with costs to the State and collection and disbursement as aforesaid, the same proceedings in all respects shall be had as is hereinbefore provided for payment of interest on such bonds, by collection in such county or city, and disbursement in the manner and upon the basis hereinbefore provided, of an annual tax sufficient for the purposes in this section contemplated; and the same shall be collected and applied, as aforesaid, to such purpose from year to year, until full satisfaction thereof, when said bonds shall be collected and destroyed, as is hereinbefore provided."

The counties and towns issuing the bonds referred to, have been shown to possess ample resources for the prompt payment of both interest and principal, and furthermore, that the payment thereof is assumed and guaranteed by the State. An additional security is derived from the fact that since these bonds were authorized, a new constitution has been adopted by the State of Illinois, which prohibits counties and towns from contracting any debt in aid of railroad construction, so that there is no fear of the issuance of bonds in future beyond their ability to pay.

We have no hesitation whatever in recommending these bonds as a perfectly safe investment, bearing a good rate of interest, payable semi-annually, while the bond itself is of such character as to be readily saleable at all times, in any money market in the country.

THE FIRST MORTGAGE BONDS.

Upon the whole line of road there may be issued $660,000 of bonds of the road, or $16,500 per mile, *and no more.* These bonds are secured by a first mortgage upon the entire road, its equipment and income. The bonds bear 7 per cent. interest, and are payable, principal and interest, in gold, in New York, on the first day of May and November.

One-fourth of the line of the road is now completed from Tamaroa, the junction with the Illinois Central road to Pinckneyville, and the bonds for that portion are now on the market. Additional bonds will be issued as the work progresses.

We feel confident that the security for these Bonds is ample to make them a safe and profitable investment. The traffic which awaits the completion of the line is believed to be sufficient to meet the interest, and to provide the sinking fund for their final redemption. The coal companies, already organized, and only awaiting the completion of the road to Chester to commence operations, have sufficient capacity to furnish a business to the road at once, sufficient for this purpose, and the impetus given to the industry of the country traversed by the completion of the road, must largely increase every kind of business.

Col. Foster estimates the demand for coal, from steamers alone, at Chester, at one thousand tons a day. This alone, at the mini-

mum rate of fifty cents per ton, will meet all the running expenses, pay the interest on the first mortgage bonds, the sinking fund, and a small surplus for dividend on the stock. There is little doubt but that the other business will pay all operating expenses at the outset, leaving the coal traffic as net profit. If but one-half of Col. Foster's estimate be realized, the security for the bonds is ample.

The history of all well managed coal roads in this country goes to prove conclusively the profitable and reliable character of this trade. There are many instances where roads have been able in their first year to pay all operating expenses, the interest on their first mortgage bonds, and a dividend on their stock out of their coal traffic, and that too where their markets for coal were much more remote than they will be from this road.

Besides this coal trade there is the business furnished by the products of two of the finest agricultural counties in the State of Illinois, producing heavy crops of grain, the great bulk of which must find its way to market over the Chester and Tamaroa road.

We give in the appendix the Charter of the road, and a copy of the mortgage on which the bonds are issued.

A sinking fund is provided for the payment of the bonds at maturity, which is ample for that purpose.

Tamaroa, Ills. May 10, 1871.

An Act to Incorporate the Chester and Tamaroa Coal and Railroad Company.

SECTION 1.—Be it enacted by the people of the State of Illinois, represented in the General Assembly, That Andrew J. Bryden, H. E. Hosford, Dewitt C. Barber, Thomas M. Sams, William K. Murphy, Joel M. Sullivan, R. M. Davis, John H. Barber, Zebedee P. Curlee, Joseph P. Holmes, and John M. McCutcheon, and their associates, successors and assigns, be, and are hereby created, a body politic and corporate, under the name and style of the "Chester and Tamaroa Coal and Railroad Company," and by that name be, and they are hereby made, capable in law and in equity to sue and be sued, plead and be impleaded, defend and be defended, in any Court of law and equity in this State, to make, have and use a common seal, and the

same to renew and alter at pleasure, and shall be and hereby are vested with all powers, privileges and immunities, which are or may be necessary to engage in mining, and to construct, complete and operate a Railroad, with a single or double track, commencing at Chester, in Randolph County, Illinois, thence running easterly on the most eligible route via Pinckneyville, in Perry County, Illinois, to Tamaroa, in said Perry County, and for this purpose, said Company are authorized to lay out their said Railroad, not exceeding one hundred feet in width through the whole length, and for the purpose of cuttings, embankments, stone or grade may take as much more land, as may be necessary for the proper construction and security of said Railroad, and shall have power to extend the same to and connect with or cross over any other Railroad within the State of Illinois, and may make such lateral or branch road or roads, to any coal lands belonging to said Company, as they may deem necessary for the successful prosecution of their business, and said Company may enter upon and take possession of so much land as may be necessary for the construction and maintenance of said Railroad and branches, depots, side tracks, water stations, engine houses, machine shops, and other buildings and appendages, necessary for the construction and working of said Road, and in case said lands be not donated to said Company for such purpose, it shall be lawful for said Company to proceed to condemn said land as provided by the laws of this State, concerning right of way.

Sec. 2.—The said Corporation may take and transport upon said Railroad, any person or persons, merchandise or other property, and may fix, establish, take and receive, such rate of toll, for any passengers and property transported upon the same, as the Directors shall, from time to time, establish, subject to such limitations and restrictions as are or may be provided by general law.

Sec. 3.—The said corporation is hereby vested with power to purchase, hold and convey real and personal estate, to give and receive promissory notes, to enter into and carry on all kind of mechanical and manufacturing business, to erect mills, furnaces, founderies, factories, and machine shops, for the manufacture of flour, lumber, iron castings, machinery, farming utensils, and any other kind or description of article not forbidden by law, and may erect and build marine ways or dry docks; and use the same for the purposes of repairing and building boats, barges, or any other description of water craft; may buy, build and own boats, barges, or other vessels, and navigate the same, for the transportation of their coal, manufacture, or for other purposes.

Sec. 4.—The Capital Stock of said Corporation shall be One Million of Dollars, which may be increased to any sum not exceeding Five Million Dollars, to be divided into shares of one hundred dollars each, which is hereby declared personal property, and transferable on the books of the Company, in such manner as shall be prescribed by the By-Laws of said Corporation.

Sec. 5.—It shall be lawful for said Company, from time to time, to borrow such sum or sums of money as may be necessary for completing and operating said Railroad, or for conducting their mining or manufacturing business, and to issue and dispose of their bonds, in denominations of not less than one hundred dollars, bearing a rate of interest not exceeding ten per cent. per annum, for any amount so borrowed, and to mortgage the real and personal Estate of said Corporation or to convey the same by deed of trust, to secure the payment of any debt contracted by said Company for the purposes aforesaid.

Sec. 6.—In the sale or mortgaging of the real and personal Estate of said Corporation, the conveyances shall be signed by the President and countersigned by the Secretary, under the Seal of the Corporation, and be acknowledged in the same manner as is provided by law for the acknowledging of Deeds.

Sec. 7.—The affairs of said Company shall be managed by a Board of eleven Directors, which may be increased to any number, not exceeding thirteen, a majority of whom shall constitute a quorum to do business, and Andrew J. Bryden, H. E. Hosford. Dewitt C. Barber, Thomas M. Sams, William K. Murphy, Joe M. Sullivan, R. M. Davis, John H. Barber, Zebidee P. Curlee, Joseph B. Holmes, and John M. McCutcheon, are hereby appointed the first Board who shall hold their offices until their successors are elected and qualified in such manner as may be prescribed by the By-Laws of said Company; said Board shall have the power of electing one of their number President, and such other officers as may be prescribed by the By-Laws, and said Corporation shall be and is hereby vested with all the powers conferred upon Rail Road incorporations, by the general Rail Road Laws of the State of Illinois or any amendment thereto.

Sec. 8.—This Act shall be a public act and take effect, and be in force from and after its passage.

Approved, March 4th, 1869.

UNITED STATES OF AMERICA, } ss. OFFICE OF SECRETARY.
STATE OF ILLINOIS, }

I, EDWARD RUMMEL, Secretary of State of Illinois, do hereby certify that the foregoing is a true copy of an Act to incorporate the CHESTER & TAMAROA COAL AND RAIL ROAD COMPANY approved March 4th, 1869, now on file in this office.

IN WITNESS WHEREOF, I hereto set my hand and affix the Great Seal of State, at the city of Springfield, the 4th day of March, A. D. 1869.

[SEAL.] SIGNED. EDWARD RUMMEL,
Secretary of State.

[COPY.]

An Act supplemental to an Act to Incorporate the Chester and Tamaroa Coal and Railroad Company.

SECTION 1. Be it enacted by the people of the State of Illinois, represented in the General Assembly:

That Section 3 of said Act, to which this Act is supplemental, be and the same is hereby repealed, and in lieu thereof, and the powers therein conferred, the said corporation shall have power to lease, purchase, and hold real estate along the line of their said road, and personal property, and convey the same, so far as may be necessary to carry on the business of said corporation, and may, at any point or points along the line of their said railroad, manufacture iron or other minerals, and may establish, maintain, and operate machine shops and furnaces for the purposes aforesaid, and may mine coal, and establish such dock or docks at the terminus of their road, on the Mississippi River, as may be necessary to facilitate the transportation of their coal, iron, or other minerals.

SECTION 2. This Act shall take effect from and after its passage.
Approved, March 4th, 1869.

UNITED STATES OF AMERICA, } ss.
STATE OF ILLINOIS. } OFFICE OF SECRETARY.

I, EDWARD RUMMEL, Secretary of State of Illinois, do hereby certify that the foregoing is a true copy of "An Act supplemental to an Act to Incorporate the Chester and Tamaroa Coal and Railroad Company," approved March 4th, 1869, now on file in this office.

IN WITNESS WHEREOF, I hereto set my hand and affix the Great Seal of the State, at the City of Springfield, this 4th day of March, A. D. 1869.

[SEAL.] SIGNED, EDWARD RUMMEL,
Secretary of State.

COPY OF MORTGAGE.

THIS INDENTURE, made this twelfth day of April, in the year of our Lord eighteen hundred and seventy-one, between the CHESTER AND TAMAROA COAL AND RAILROAD COMPANY, a Corporation chartered by the State of Illinois, party of the first part, and THE FARMERS' LOAN AND TRUST COMPANY, a Corporation chartered by law in the State of New York, and having its office and place of business in the City of New York, party of the second part, witnesseth:

THAT WHEREAS, at a meeting of the Board of Directors of said party of the first part, held at the office of said Company in Tamaroa, in the State of Illinois, on the 17th day of November, A. D., 1870, the following resolutions were adopted, to-wit:

I. RESOLVED,—"That it is at this time expedient and necessary for this Company to borrow the sum of six hundred and sixty thousand dollars, for the purpose of completing and operating its railroad, and for conducting its mining and manufacturing business."

II. RESOLVED FURTHER,—"That a series of Bonds, and a Mortgage or Deed of Trust to secure the same, be prepared under the superintendence of the President; which series of Bonds shall not exceed in the aggregate the sum of six hundred and sixty thousand dollars, and shall be for one thousand dollars each, bearing interest at the rate of seven per cent. per annum, payable semi-annually in gold coin; the principal money of said Bonds shall be made payable in gold coin to bearer, (subject to a privilege of registration of ownership as hereinafter mentioned,) on the first day of November, A. D., 1900, at THE FARMERS' LOAN AND TRUST COMPANY, in the City of New York, or at such other place in said City, as this Company may appoint, and give five days' notice of, by publication in some newspaper of said City; and the interest shall be made payable in gold coin, at the same place, or at such other place as said Company may appoint, and give five days' notice of, by publication, as aforesaid, semi-annually, on the first days of May and November, successively, in each year, until the principal is paid, according to interest Coupons attached to said Bonds: said Bonds shall be

consecutively numbered, beginning with number one, and shall, without reference to the order in which they are numbered, or the time they are issued, stand on an equality, and there shall be no priority as to lien or payment of one over the other; they shall be so made as to pass by delivery or by transfer on the books of the Company, in the City of New York, or at any other place which the Company may name for that purpose. The holder of any of said Bonds, may cause the ownership thereof to be registered on the transfer or other Books of the Company, in the City of New York, or other place, named as aforesaid, and after such registration of ownership, certified on said Bonds by the transfer Agent of the Company; no transfer, except on the Books of the Company, shall be valid unless the last transfer be to bearer, which shall restore transferability by delivery; but said Bonds shall continue subject to successive registrations and transfers to bearer, as aforesaid, at the option of each holder; and the interest Coupons attached to said Bonds shall be payable to the registered holder of the Bond, or order, unless the said Bond is registered to bearer, in which case said Coupons shall be payable to bearer, said Bonds, prior to their issue, shall be signed by the President, and countersigned by the Treasurer, and the Coupons shall be evidenced by the signature of the Treasurer engraved thereon."

III. Resolved further,—"That a Mortgage or Deed of Trust be prepared, which shall be signed by the President, and countersigned by the Secretary, under the Corporate Seal of this Company, and be acknowledged in the same manner as is provided by the laws of this State, for the acknowledging of Deeds, conveying to The Farmers' Loan and Trust Company, a Corporation of the State of New York, the road of this Company, as authorized by its Charter, commencing at Chester, in Randolph County, Illinois, thence running easterly via Pinckneyville, in Perry County, Illinois, to Tamaroa, in said Perry County, whether made or hereafter to be made, with the right of way, and all the real and personal property used or appropriated for the operating and maintaining said road, whether now owned or hereafter to be acquired, and all the privileges and franchises of this Company, for the holding, operating and main-

taining the same, together with the income arising from said road and property, and also all such other property of the Company as the President may see fit to include in said Mortgage by specifically designating the same therein, (but excluding all the real estate and personal property of this Company, not so used or appropriated or specifically designated as aforesaid,) in trust, to secure the payment of said Bonds and interest Coupons, and upon such terms and with such provisions as the President of this Company may, by executing said Mortgage or Deed, approve."

And Whereas, the said party of the first part, in pursuance of said resolutions, hath made and executed six hundred and sixty Bonds, of even date herewith, and of the numbers, form, denomination and character prescribed by the resolutions aforesaid, and hold the same to be authenticated and disposed of in accordance with the provisions and requisitions of said resolutions, and as authorized by law.

Now, therefore, in further pursuance of said resolutions, and to the end and purpose of securing the punctual payment of the said six hundred and sixty Bonds, and each of them, to each and every person who may become the holder of the same, or any of them, with the interest thereon. This Indenture witnesseth:

That the said Chester and Tamaroa Coal and Railroad Company, party of the first part, in consideration of all and singular the premises, and for the further consideration of one dollar, to it paid by the said Farmers' Loan and Trust Company, party of the second part, at and before the ensealing of these presents, the receipt of which is hereby acknowledged, doth hereby grant, bargain, sell, enfeoff, release, assign, and convey unto said party of the second part, and its assigns, or to any successor of it, in this trust, all and singular, the entire Railroad of this Company, as authorized by its Charter, commencing at Chester, in Randolph County, in the State of Illinois, thence running eastwardly by way of Pinckneyville, in Perry County, Illinois, to Tamaroa, in said Perry County, whether made or hereafter to be made, with the right of way, and all the real and personal property used or appropriated for the operating and maintaining said Railroad, whether now owned or hereafter to be acquired, and all the privileges and franchises of said party of the first part, or the

holding, operating and maintaining the same, together with the income arising from said Railroad and property: Provided, however, that the grant and conveyance aforesaid, shall not include, nor operate to transfer, nor be held to prohibit the party of the first part from selling and conveying, free from the lien of this instrument, any land which said party of the first part now owns, or may hereafter own, that is not used for any purpose incident to the management and operation of said Railroad, or for the repairs and maintenance of the same; nor be held to prohibit it from applying any money or personal property belonging to it, to the construction and repairs of said Railroad and its branches, or the appurtenances of either, or to carry on its mining business, or other current expenses, or to the purchase of the necessary equipment, tools and machinery, or the renewal thereof; and the Board of Directors may likewise lawfully distribute such net annual income or profits to Stockholders, after paying the interest on the Bonds aforesaid, as shall accrue beyond said interest.

To have and to hold, the premises, interests, and rights, which pass, or are intended to pass by this conveyance, unto the said party of the second part, its successors and assigns forever. In trust, nevertheless, for the persons and corporations, and for the protection, benefit and security of the persons or corporations who shall hold the Bonds about to be issued by the said party of the first part, and for the enforcing of the stipulations of said party of the first part, in this behalf, in their true intent and meaning, whether contained in said Bonds, or interest warrants, or in this Deed; and for the better assuring and confirming the title and power of the said party of the second part, and especially in relation to such property, interests, and rights, hereafter accruing to, or acquired by said party of the first part, and intended to pass by this conveyance, the said party of the first part hereby covenants with said party of the second part and its successors, or assigns, that at any time hereafter, and as often as may be required by the holder of the above granted estate, in trust; the said party of the first part will do such acts and make such further assurances in law as such Trustee shall, by counsel learned in the law, be reasonably advised, are necessary for, or tend to, the better carrying out of the object of the parties to this Deed.

In case default be made by said party of the first part, in payment of any money, either principal or interest secured by this Mortgage, the said party of the first part hereby covenants and agrees with the said grantee, that within six months after such default shall have been made, the same default still continuing, it will, on demand of the Trustee for the time being, surrender to such Trustee, or to the Agent of such Trustee, the actual possession of the herein granted and demised premises; and said Trustee shall have the right to inspect and take copies of any records, books or papers of said party of the first part. The expenses of taking, holding, and managing said property, if possession be taken, shall be paid from the income, and, if necessary, from the sale of such personal property as the Trustee may deem proper. And the said party of the first part doth herewith and hereby give its warrant of attorney, irrevocable, by which, in case of default by it, to make payment of any sum of money, either principal or interest secured by this Mortgage, for the period of six months after the same shall have become due and payable, it doth authorize any Attorney at law, or solicitor in Chancery, of the State of Illinois, after notice to it as hereinafter provided, to enter its appearance without process, in any court or courts of competent jurisdiction, to any petition or petitions, bill or bills, filed by such Trustee for the time being, for the foreclosure and sale of the premises by this Deed granted and conveyed, or any part thereof, and, if requested by said Trustee, to consent on behalf of said party of the first part, that a receiver or receivers be appointed forthwith, by order of said court or courts, to take possession of said road, or any part thereof, and of all or any of the property, real or personal, hereby conveyed, and of all or any of the effects, books, business or papers, of said party of the first part, upon such terms, conditions and restrictions as said court or courts shall prescribe; and further to consent that a decree or decrees forthwith pass for the sale of the whole or any part of the premises hereby granted and conveyed, without appraisement, but under the direction of the Court, and to enter on behalf of said party of the first part, a stipulation not to appeal from said decree, and not to impede the execution thereof, by an application for a rehearing, or by a bill of review, or by other step to pro-

cure delay: Provided, however, that said Trustee shall not demand the surrender of possession of said property, or file a bill for the foreclosure and sale of said premises, unless the same is requested, in writing, by holders of a majority in interest of said Bonds at their par value, nor shall any judgment, order or decree, as aforesaid, be made or rendered until after thirty days' written notice of the time and place of applying for the same, shall first have been given to said party of the first part.

And it is further agreed, by the party of the first part, that in case it shall make default of the payment of its interest warrants, or any of them for the period of six——months, after demand of payment, after due, then the whole principal money named in said Bonds shall become due and payable.

And it is further agreed, by said party of the first part, that the proceeds of the sale hereinbefore mentioned, shall be applied first, to paying said Trustee all reasonable charges and expenses, and to indemnify such Trustee from all liability as such; secondly, to paying the holders of said Bonds in full, or in equal proportions the principal and interest of said Bonds, and lastly, to pay the surplus, if any, to the members of said Coal and Railroad Company, who hold stock at the time of the sale.

It is hereby mutually agreed, by said parties, that said Trustee shall be responsible for gross negligence and willful default only; nor shall said Trustee be bound to take any other steps (unless at the option of such Trustee) touching the execution of this trust, which, in the opinion of such Trustee, is likely to involve it in expense or personal liability, unless some one or more of the Bondholders (as often as the Trustee shall deem necessary) shall give to said Trustee reasonable security and indemnity against such expenses and personal liability, anything hereinbefore contained to the contrary notwithstanding.

In all cases in which the said Trustee may be required to act, it is hereby invested with full powers of arbitrament and of compromise, and of appointing Agents and Attorneys to act in its behalf.

If after the acceptance of this trust, by the said Farmers' Loan and Trust Company, it shall refuse or be unable from any cause

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to discharge the duties of such Trustee, or upon the decease or inability to act of any other Trustee hereafter appointed by a Court of Equity as successor, any Court of competent jurisdiction is hereby authorized to appoint a Trustee or Trustees, in the place of such refusing, disabled or deceased Trustee or Trustees, on application by the holders of one-sixth of the number of said Bonds, and by decree or otherwise invest the corporation or persons so appointed, with the full estate, powers, rights, duties and obligations of the present Trustee, and subject to the provisions and stipulations of this Indenture; and it is hereby declared that all the estate, trusts, powers, provisions, stipulations and conditions of this Indenture shall attach to and be executed by whomsoever shall be appointed Trustee as aforesaid, in the same manner as by and to the said original Trustee, *provided*, however, nevertheless, and these presents are upon the following express condition, that if the said party of the first part shall well and truly pay to the holders of the said Bonds, the several and respective sums of money and interest due and accruing on the day, and according to the conditions therein expressed, then and thenceforth this Indenture and the estate hereby granted shall become void.

In Witness Whereof, the said Chester and Tamaroa Coal and Railroad Company, hath caused its corporate Seal to be hereto affixed, and these presents to be signed by Dewitt C. Barber, its President, and to be countersigned by Zebedee P. Curlee, its Secretary, (duly authorized by the resolutions hereinbefore recited) on the day and year first hereinbefore written.

D. C. BARBER, *President*,

Of the CHESTER AND TAMAROA COAL AND RAILROAD COMPANY.

Countersigned by

ZEBEDEE P. CURLEE, *Secretary*.

SIGNED, SEALED, ACKNOWLEDGED AND
DELIVERED IN PRESENCE OF

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THE STATE OF ILLINOIS, }
COUNTY OF PERRY, } ss.

BE IT KNOWN, that on the 12th day of April, in the year of our Lord eighteen hundred and seventy-one, before me, the undersigned, a Notary Public, within and for the State and County aforesaid, duly commissioned and qualified, came the CHESTER AND TAMAROA COAL AND RAILROAD COMPANY, by Dewitt C. Barber, its President, and Zebedee P. Curlee, its Secretary, and acknowledged the signing and sealing of the foregoing Mortgage, or Deed of Trust, to be its voluntary act and deed, and the said Dewitt C. Barber and Zebedee P. Curlee, to me personally known, being by me duly sworn, respectively say that they are respectively the President and Secretary of the said CHESTER AND TAMAROA COAL AND RAILROAD COMPANY, that the seal affixed to the foregoing instrument is the Corporate Seal of said Company, and that the same was so affixed by authority of the Board of Directors of said Company, and that they respectively signed their names to said instrument as President and Secretary by like authority, and thereupon they severally acknowledged the signing and sealing of said instrument, to be also their voluntary act and deed, as such President and Secretary.

IN WITNESS WHEREOF, I have hereto set my hand and Notarial Seal the day and year first above written.

THE FARMERS' LOAN AND TRUST COMPANY, a Corporation of the State of New York, hereby acknowledges the delivery to it of the foregoing instrument, and the acceptance of the trusts therein named.

IN WITNESS WHEREOF, it has caused its Corporate signature and seal to be hereto attached, by R. G. ROLSTON, its President, thereto duly authorized, this———day of———A. D., 1871.

(L.S.)

The Farmers' Loan and Trust Company,

BY R. G. ROLSTON, *President.*